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GARLICK HARRISON & MARKISON
P.O. BOX 160727
AUSTIN, TX 78716-0727

EXAMINER	
BEAMER, TEMICA M	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/780,160	BYE, RICHARD A.	
	Examiner	Art Unit	
	Temica M. Beamer	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 2, 2007 have been fully considered but they are not persuasive. Applicant's primary arguments are that Ibe fails to disclose, as amended, determining the physical location of a wireless terminal relative to the coverage area of a WLAN, further that Ibe fails to disclose initiating a handoff before loss of a signal and further that Ibe fails to disclose comparing the signal strengths of multiple access points. The examiner, however, disagrees with these arguments.

Ibe discloses a data handoff method between a wireless local area network and a wireless wide area network. Regarding the first argument, Ibe discloses that when a Cellular Controller receives a call for a mobile device it uses SIP based VOIP in an effort to forward the call to the mobile device (0039). Ibe specifically discloses that the Cellular Controller works with a Control Server in order to locate the user in a building (which reads on determining the physical location of the mobile device) in order to send calls to the mobile device (0038).

Regarding the second and third arguments, Ibe discloses in figure 1, multiple access points that wireless devices can communicate with. Inherently, the mobile device will choose which access point which has the strongest signal strength. Further, Ibe discloses that when a user of a mobile device (laptop) decides to move to a new location, and when it is detected that when the device roams into a building of poor cellular coverage and good WLAN coverage (reads on initiating a handoff before

loss of a signal and comparing the signal strengths of multiple access points), the connection will be handed off to the system with the best coverage area (0044, 0045).

Based on the above arguments, the examiner maintains that Ibe, taken alone or in combination, reads on the invention as presently claimed. The rejections to the claims are set forth below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 6, 9-16, 19, 22-29, 32 and 35-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Ibe et al (Ibe), U.S. Patent Pub. No. 2004/0218575.

Regarding claim 1, Ibe discloses a method for servicing communications from a Call Control Entity (CCE) to a wireless terminal, comprising: communicatively coupling the CCE with a wireless local area network (WLAN); receiving at the CCE a call for the wireless terminal; determining if the wireless terminal is serviced by the WLAN; delivering the call to the wireless terminal via the WLAN if the wireless terminal is

serviced by the WLAN; and attempting to deliver the call to the wireless terminal via a cellular network if the wireless terminal is not serviced by the WLAN (0039 and 0047).

Regarding claim 3, Ibe discloses the method of claim 1, further comprising: determining a location of the wireless terminal relative to a coverage area of the WLAN; determining the location of the wireless terminal relative to a coverage area of the cellular network; servicing the call with the WLAN when the location of the wireless terminal is within the coverage area of the WLAN; and servicing the call with the cellular network when the location of the wireless terminal is outside the coverage area of the WLAN but within the coverage area of the cellular network (0039 and 0044; figure 1).

Regarding claim 6, Ibe discloses the method of claim 3, further comprising initiating a handoff of the call from the WLAN to the cellular network before a loss of signal with the WLAN is expected to occur, based on the relative motion of the wireless terminal towards a boundary of a coverage area of the WLAN (0044, 0045).

Regarding claim 9, Ibe discloses the method of claim 1, further comprising delivering the call to the wireless terminal via the WLAN or the cellular network based on comparing the signal quality of the WLAN and the signal quality of the cellular network (0045).

Regarding claim 10, Ibe discloses the method of claim 1, further comprising comparing signal strengths from a plurality of Access Points (APs) in the WLAN to determine whether to service the wireless terminal with the WLAN or the cellular network (0044 and 0045).

Regarding claim 11, Ibe discloses the method of claim 3, further comprising observing the signal strengths over time from a plurality of APs to predict whether the wireless terminal is leaving a coverage area of the WLAN (0045).

Regarding claim 12, Ibe discloses the method of claim 3, further comprising: comparing relative signal quality of the cellular network and the WLAN; and choosing to service the call based on relative service quality between the parallel communication path and the WLAN (0044 and 0045).

Regarding claim 13, Ibe discloses the method of claim 3, further comprising: servicing the call to the wireless terminal via the cellular network when the signal quality of a serving Access Point (AP) fails to meet the first handoff threshold and when signal strengths of all Access Points (APs) in the WLAN are decreasing (0044).

Regarding claim 14, Ibe discloses a method for servicing communications to a wireless terminal with a wireless local area network (WLAN) and an alternative network, comprising: servicing a call to the wireless terminal via the WLAN; determining if a signal quality between the WLAN and the wireless terminal fails to meet a first handoff threshold; establishing a parallel communication path to the wireless terminal via the alternative network to service the call; and servicing the call to the wireless terminal via the alternative network when the signal quality fails to meet a second handoff threshold; terminating the communication path between the wireless terminal and the WLAN when the signal quality between the WLAN and the wireless terminal decreases below the second handoff threshold; servicing the call to the wireless terminal via the WLAN when the signal quality increases above the first handoff threshold; and terminating the

communication path between the wireless terminal and the alternative network when the signal quality between the WLAN and the wireless terminal increases above the first handoff threshold (0044-0046).

Regarding claim 15, Ibe discloses the method of claim 14, further comprising: determining a location of the wireless terminal relative to a coverage area of the WLAN; determining the location of the wireless terminal relative to a coverage area of the alternative network; servicing the call with the WLAN when the location of the wireless terminal is within the coverage area of the WLAN; and servicing the call with the alternative network when the location of the wireless terminal is outside the coverage area of the WLAN but within the coverage area of the alternative network (0039, 0044).

Regarding claim 16, Ibe discloses the method of claim 14, wherein the alternative network comprises a cellular network (figure 1).

Regarding claim 19, Ibe discloses the method of claim 14, further comprising initiating a handoff of the call from the WLAN to the alternative network before a loss of signal within the WLAN based on the relative motion of the wireless terminal relative to a boundary of a coverage area of the WLAN (0044, 0045).

Regarding claim 22, Ibe discloses the method of claim 14, further comprising determining whether to handoff/deliver call to wireless terminal via WLAN or the alternative network based on comparing the signal quality of the WLAN and the signal quality of the alternative network (0044, 0045).

Regarding claim 23, Ibe discloses the method of claim 14, further comprising comparing signal strengths from a plurality of Access Points (APs) in the WLAN to

determine whether to service the wireless terminal with the WLAN or the alternative network (0044, 0045).

Regarding claim 24, Ibe discloses the method of claim 14, further comprising observing the signal strengths over time (continuous) from a plurality of APs to predict whether the wireless terminal is leaving a coverage area of the WLAN (0045).

Regarding claim 25, Ibe discloses the method of claim 14, further comprising: comparing relative signal quality of the parallel communication path and the WLAN; and choosing to service the call based on relative service quality between the parallel communication path and the WLAN (0044, 0045).

Regarding claim 26, Ibe discloses the method of claim 14, further comprising: servicing the call to the wireless terminal via the alternative network when the signal quality of a serving Access Point (AP) fails to meet the first handoff threshold and when a signal strength of all Access Points (APs) in the WLAN are decreasing (0044).

Regarding claim 27, Ibe discloses a method for servicing a wireless terminal via a wireless local area network (WLAN) comprising: servicing a call with the wireless terminal via a cellular network; determining that a service quality supportable by the WLAN meets a first handoff threshold; establishing a parallel communication path to the wireless terminal via the WLAN; and when the service quality supported by the WLAN meets a second handoff threshold, terminating the communication path to the wireless terminal via the cellular network; and when the service quality supported by the WLAN subsequently fails meets the first handoff threshold, terminating the communication path to the wireless terminal via the WLAN (0044-0047).

Regarding claim 28, Ibe discloses the method of claim 27, further comprising: determining a location of the wireless terminal relative to a coverage area of the WLAN; determining the location of the wireless terminal relative to a coverage area of the alternative network; servicing the call with the WLAN when the location of the wireless terminal is within the coverage area of the WLAN; and servicing the call with the alternative network when the location of the wireless terminal is outside a coverage area of the WLAN but within the coverage area of the alternative network (0039-0044).

Regarding claim 29, Ibe discloses the method of claim 27, wherein the alternative network comprises a cellular network (figure 1).

Regarding claim 32, Ibe discloses the method of claim 27, further comprising initiating a handoff of the call from the WLAN to the alternative network before a loss of signal within the WLAN based on the relative motion of the wireless terminal relative to a boundary of a coverage area of the WLAN (0044, 0045).

Regarding claim 35, Ibe discloses the method of claim 28, further comprising determining whether to handoff/deliver call to wireless terminal via WLAN or the alternative network based on comparing the signal quality of the WLAN and the signal quality of the alternative network (0044-0046).

Regarding claim 36, Ibe discloses the method of claim 27, further comprising comparing signal strengths from a plurality of Access Points (APs) in the WLAN to determine whether service the wireless terminal with the WLAN or the alternative network (0044-0046).

Regarding claim 37, Ibe discloses the method of claim 27, further comprising observing the signal strengths over time from a plurality of APs to predict whether the wireless terminal is leaving a coverage area of the WLAN (0045).

Regarding claim 38, Ibe discloses the method of claim 27, further comprising: comparing relative signal quality of the parallel communication path and the WLAN; and choosing to service the call based on relative service quality between the parallel communication path and the WLAN (0044, 0045).

Regarding claim 39, Ibe discloses the method of claim 27, further comprising: servicing the call to the wireless terminal via the alternative network when the signal quality of a serving Access Point (AP) fails to meet the first handoff threshold and when a signal strength of all Access Points (APs) in the WLAN are decreasing (0044).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ibe in view of Goss, U.S. Patent No. 6,320,534.

Regarding claim 2, Ibe discloses the method of claim 1 as described above. Ibe, however, fails to disclose delivering the call to voice mail if the call cannot be delivered to the wireless terminal.

In a similar field of endeavor, Goss discloses a location based personal telephone routing system. Goss further discloses delivering a call to voice mail if the call cannot be delivered to the mobile (col. 5, lines 1-15).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Ibe with the teachings of Goss for the purpose of ensuring that a called party will not miss an important message.

6. Claims 4, 5, 18 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibe in view of Rajkotia et al (Rajkotia), U.S. Patent Pub. No. 2004/0121774).

Regarding claim 4, Ibe discloses the method of claim 3 as described above. Ibe, however, fails to disclose determining the location of the wireless terminal with Global Positioning Satellites (GPS).

In a similar field of endeavor, Rajkotia discloses an apparatus and method for performing an interfrequency handoff in a wireless network. Rajkotia further discloses determining the location of the wireless terminal with Global Positioning Satellites (GPS). determining the location of the wireless terminal with Global Positioning Satellites (GPS) (0052).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Ibe with the teachings of Rajkotia for the purpose of more accurately locating the mobile station when it is traveling through multiple systems.

Regarding claims 5, the combination of Ibe and Rajkotia discloses the method of claim 4, further comprising: determining a relative motion and location of the wireless terminal relative to a boundary of a coverage area of the WLAN; determining a relative motion and location of the wireless terminal relative to a coverage area of the cellular network; servicing the call with the WLAN when the location of the wireless terminal is within the coverage area of the WLAN; and servicing the call with the cellular network when: the relative motion of the wireless terminal is towards the boundary of the coverage area of the WLAN; or the location of the wireless terminal is within the coverage area of the cellular network and the wireless terminal is predicted to leave the coverage area of the WLAN (Rajkotia, 0070-0076).

Regarding claims 18 and 31, Ibe discloses the method of claims 14 and 27 as described above. Ibe, however, fails to disclose determining a relative motion and location of the wireless terminal relative to a boundary of a coverage area of the WLAN; determining a relative motion and location of the wireless terminal relative to a coverage area of the alternative network; servicing the call with the WLAN when the location of the wireless terminal is within the coverage area of the WLAN; and servicing the call with the alternative network when: the relative motion of the wireless terminal is towards the boundary of the coverage area of the WLAN; or the location of the wireless terminal is within the coverage area of the alternative network and predicted to leave the coverage area of the WLAN.

Rajkotia discloses this limitation (0070-0076).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Ibe with the teachings of Rajkotia for the purpose of ensuring the call is continued.

7. Claims 7, 8, 20, 21, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibe in view of Wang et al (Wang), U.S. Patent Pub. No. 2004/0192341.

Regarding claims 7, 20 and 33, Ibe discloses the method of claims 3, 14 and 27 as described above. Ibe, however, fails to disclose predicting if the wireless terminal will leave a coverage area of the WLAN based on previous movements of the wireless terminal relative to the coverage area of the WLAN.

In a similar field of endeavor, Wang discloses an apparatus and an associated method for reserving resources in a mobile communication system through the use of historical indicia.

Wang further discloses predicting if a wireless terminal will leave a coverage area of a network based on previous movements of the wireless terminal relative to the coverage area of the network (0044); figure 7).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Ibe with the teachings of Wang for the purpose of knowing whether resources should be reserved for the mobile in an effort to maintain communication.

Regarding claims 8, 21 and 34, the combination of Ibe and Wang discloses the method of claims 7, 20 and 33 further comprising servicing the call with the WLAN when the wireless terminal is predicted to stay within the coverage area of the WLAN (0045).

8. Claims 17 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibe in view of well known prior art.

Regarding claims 17 and 30, Ibe discloses the methods of claims 14 and 27 as described above.

Ibe, however, fails to disclose wherein the alternative network comprises a satellite-based network.

The examiner contends, however, that satellite networks are well known in art and it is further known for handoff functions to take place in satellite networks and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Ibe with the teachings of well known prior art since it is known that satellite systems can in certain instances, provide more coverage to users.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Beamer whose telephone number is (571) 272-7797. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Temica M. Beamer
Primary Examiner
Art Unit 2617

tmb

TEMICA BEAMER
PRIMARY EXAMINER